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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/605,568	10/09/2003	Tim A. Matus	ITW7510.063	2567
33647	7590	05/04/2005	EXAMINER	
ZIOLEKOWSKI PATENT SOLUTIONS GROUP, SC (ITW)			HOANG, TU BA	
14135 NORTH CEDARBURG ROAD			ART UNIT	
MEQUON, WI 53097			PAPER NUMBER	

3742

DATE MAILED: 05/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/605,568	Applicant(s) MATUS ET AL.	
	Examiner Tu Ba Hoang	Art Unit 3742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 07 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

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***Response to Amendment***

Applicant's amendments/arguments filed 03/07/05 have been fully considered but they are not persuasive as for the following reasons:

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-13, 15-18, and 20-22 as amended are still rejected under 35 U.S.C. 102(b) as being anticipated by Schneider et al (US 5,866,869) cited by the Applicants. Schneider et al shows all features of the claimed invention as described in the previous Office Action, including a plasma cutting system or assembly (Figures 1-2) comprising a plasma cutting power source 102, a plasma torch 100 operationally connected to the plasma cutting power source 102, and a processing unit 104 disposed within the plasma torch as shown in Figure 1 (column 3, lines 11-17) and configured to control the plasma cutting power source (column 4, lines 3-15 and column 5, lines 30-32) during a plasma cutting process (also see column 4, line 66 to column 5, line 6), wherein the processing unit 104 is further configured to receive data (i.e., feedback signals or communications link 110 and 112) from a plurality of sensors 106 (column 4, lines 59-65, i.e., 106 circuitry including W, A, E disposed within the plasma torch, configured to interpret feedback from the sensors and regulate operation of the plasma cutting power source (i.e., magnitude of cutting arc current and pilot current) according to the feedback (i.e., output W and anode A as set forth at column 3, lines 26-33), the processing unit 104 is further configured to serialize communication with the plasma cutting power source 102 (i.e., through sense unit 106, and processing unit 104 as shown clearly in Figure 2) to receive control data (or feedback signals 110,112) from at least one user input (i.e., at switch 114), which is one of at least a start pilot arc command and an adjust amperage control (column 4, lines 3-15 and lines 39-52), and control the plasma cutting process according to the user input, wherein the plasma torch is configured to perform the plasma cutting process with a maximum open circuit output voltage of greater than 220 volt DC (i.e., at set forth at column 4, lines 12-24, the pilot current threshold is about 17A, the cutting arc current minimum threshold is about 10A, the control unit 108 increases the magnitude of the pilot current to 15A and at column 5, lines 7-8, resistor 116 is 3 ohms and resistor 118 is 15 ohms, the open circuit voltage,  $V=RI$ , is within the range of 30 Volts to at least 270 Volts which is at least greater than the claimed 220 volt DC), and the plasma cutting power source 102 also includes at least one controller 106 configured to adjust a power output based on at least control signals or sensing signals from the plasma torch processing unit 104, the plasma cutting power source may include logic and control circuitry for interrupting or starting operation of the torch 100 as well as for manually selecting various operating parameters (column 3, lines 18-25).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 14 and 19 as amended are rejected under 35 U.S.C. 103(a) as being unpatentable over Schneider et al set forth above. Schneider et al discloses all of the claimed features as set forth above except for the plurality of feedback sensors includes at least one outer input sensor, a power source activation sensor, an electrode type indicator, a tip type indicator and etc... (as recited in claims 4 and 19). However, Schneider et al has disclosed that the sensing circuitry 106 can comprise other types of sensing circuitry including plural sensors that are well known in the art beside current and voltage sensors (column 4, lines 59-65). It would have been within the purview of obviousness to one having ordinary skill in the art at the time the invention was made to utilize in the plasma torch of Schneider et al a plurality of sensors including those types recited in claims 14 and 19 in order to provide feedback signals or sensing signals to the processing unit or controller for a purpose if so desired.

**REMARK**

In response to applicant's argument that the reference (i.e., Schneider et al US 5,866,869) fails to show certain features of applicant's invention such as "a plasma cutting system including a processing unit disposed within the plasma torch and configured to control the plasma cutting power source of a plasma cutting process" and the reference to Schneider et al must be interpreted illogically. That is, the rejection is predicated on a comparison of nomenclature without consideration of how terms are used or defined within the reference compared to how they are used and defined with respect to the claimed invention" (emphasis added). It is noted that the features upon which applicant relies are clearly disclosed by the reference. As set forth above, Schneider et al discloses at least a plasma cutting system or assembly (Figures 1-2) comprising a plasma cutting power source 102, a plasma torch 100 operationally connected to the plasma cutting power source 102, and **a processing unit 104 disposed within the plasma torch 100 as shown in Figure 1** (column 3, lines 11-17, also in Figure 2) and configured to control the plasma cutting power source (column 4, lines 3-15 and column 5, lines 30-32) during a plasma cutting process (also see column 4, line 66 to column 5, line 6). Applicant's argument fails to show the plasma torch 100 of Schneider et al was not the same as the reference plasma torch or body (as a whole) or such plasma torch 100 of Schneider et al reference is not the same as the claimed plasma torch of the instant application. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). In this case,

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although in light of the specification, the examiner position is that there are no differences between the claimed plasma torch and the plasma torch 100 of the applied reference. Therefore, the recitation of such "a processing unit disposed within the plasma torch and configured to control the plasma cutting power source during a plasma cutting process" is clearly within the teaching of the reference. It is noted that Figure 3 of the present application has indicated the processing unit disposed within the plasma torch 16 in the same manner as the reference, therefore such argument based on the conclusion that both Figures 1 and 2 of the reference are intended for element 100 as the entire plasma cutting "system" but not the plasma torch itself does not convince the examiner that element 100 of the reference is differed from the plasma torch of the claimed invention. It is clear in the record that the element 100 of the reference is a "plasma torch", and in light of the reference disclosure (as shown by at least Figure 1) and the instant application disclosure (as shown at least by Figure 3), such "plasma torch" 100 of the reference and "plasma torch" 16 of the present application are the same. Applicant fails to show wherein the reference to Schneider et al, the element 100 is a "plasma torch system" when compare his figures 1 or 2 to the present application Figure 3. Furthermore, the claimed invention does not exclude/include the cutting power source to be disposed within/not within the plasma torch, the claimed invention can not now preclude that "the plasma torch does not include the plasma cutting power source because the plasma torch operationally connected to the plasma cutting power source", and therefore conclude that the element 100 of the reference is a plasma torch system instead. Applicant is requested to point out exactly wherein Schneider et al, the element 100 is in fact, a "plasma torch system" or perhaps such "system" differed from the claimed plasma torch or system.

Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tu Ba Hoang whose telephone number is (571) 272-4780. The examiner can normally be reached on Mon-fri from 8:30AM to 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on (571) 272-4777.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tu Ba Hoang  
Primary Examiner  
Art Unit 3742

April 25, 2005